

**Genetically modified rice and Mustard for cultivation**

3794. SHRI RAMA MUNI REDDY SIRIGIREDDY: Will the Minister of AGRICULTURE be pleased to state:

(a) whether there is any proposal before the Ministry to introduce genetically modified rice, called Golden Rice, and the Mustard variety;

(b) if so, by when Government are going to introduce the above two types of food crops; and

(c) if not, the reasons therefor?

THE MINISTER OF STATE IN THE MINISTRY OF AGRICULTURE (DR. DEBENDRA PRADHAN): (a) With regard to introduction of genetically modified rice, called Golden Rice, the issue is under discussion in Department of Bio-technology (DBT), Government of India under the second phase on Indo-Swiss Collaboration in Bio-technology. The joint project would involve back crossing and transfer of gene encoding beta carotene, a precursor of vitamin A. DBT has already identified Indian institutions to be involved and actual work shall start once the transgenic seed and gene constructs after requisite clearances reach in India.

Regarding introduction of genetically modified mustard variety, transgenics in Brassica juncea using barnase and barstar gene have been developed indigenously, and these transgenic plants are under evaluation in contained conditions.

(b) Results leading to vitamin-A rich Indian rice varieties are expected within 5-6 years, and field trials on transgenic mustard in collaboration with Indian institutions (to be identified) are expected to commence in the near future. It will also depend on clearances on biosafety aspects for which National Biosafety Guidelines of the Ministry of Environment and Forests, Government of India will be a preceding steps before these are tested in Multilocation trials leading to identification of these genetically modified varieties for commercial cultivation.

(c) Question does not arise, Sir.